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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,546	09/19/2003	David Gerald Herbeck	ROC920030134US1	4296
7590 Grant A. Johnson IBM Corporation, Dept. 917 3605 Highway 52 North Rochester, MN 55901-7829			EXAMINER CHAUHAN, LOREN B	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/664,546	Applicant(s) HERBECK ET AL.	
	Examiner Loren Chauhan	Art Unit 2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-41 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 20-30 are rejected under 35 U.S.C. 101 because claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. No physical transformation is recited and additionally, the final result of the claim is instructions, which is not a tangible result because the claims do not explicitly state they (the results) are being stored in a computer readable medium. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. § 101.

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-13, 15, 20, 23 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by **Eilert (US PAT 5,537,542; Dated July, 16,1996)**.

4. **As per claim 1, Eilert** describes a method comprising: requesting a program to modify (**referred as “improving”**) the program's performance if a service class associated with the program fails to meet a performance goal (**Col. 3, lines 59-62**).

5. **As per claim 2, Eilert** describes the method of claim 1 wherein the requesting further comprises: requesting the program to run faster (**Col. 3, lines 61-62**). Examiner is interpreting improving performance of the selected client transactions as requesting the program to run faster.

6. **As per claim 3, Eilert** describes the method of claim 1 wherein the requesting further comprises: requesting the program (**referred as “receiver goal class”**) to use more of a resource associated with the program (**Col. 4, lines 10-15, lines 48-50**). Examiner is interpreting as donating resources to a

receiver server class as requesting the program to use more of a resource associated with the program.

7. **As per claim 4, Eilert** describes the method of claim 1 wherein the requesting further comprises: requesting the program to run slower (**Col. 4, lines 45-47**). Examiner is interpreting as performance decrease as requesting a program to run slower.

8. **As per claim 5, Eilert** describes the method of claim 1 wherein the requesting further comprises: requesting the program to use less of a resource (**referred as "donor"**) associated with the program (**Col. 4, lines 44-54**). Examiner is interpreting as donor donating its resource to receiver as a program using less of its resource associated with the program.

9. **As per claim 6, Eilert** describes the method of claim 1 wherein the requesting further comprises: requesting the program to make an incremental performance modification (**Col.4, lines 62-65**). Examiner is interpreting as an incremental detection and correction of performance as requesting the program to make an incremental performance modification.

10. **As per claim 7, Eilert** describes the method of claim 6, further comprising: repeatedly performing the requesting until the service class meets the performance goal (**Col. 3, lines 59-62; Col. 4, lines 62-65**). Examiner is interpreting GDPC providing feedback loop for the incremental detection and correction of performance and monitoring the achievement as repeatedly performing the requesting until the service class meets the performance goal.

11. **As per claim 8, Eilert** describes the method of claim 6, further comprising: repeatedly performing the requesting until the service class shows no improvement towards the performance goal (**Col. 6, lines 36-40**). Examiner is interpreting providing feedback on the effect of resource reallocation made previously and again providing the opportunity to address performance problems as repeatedly performing the requesting until the service class shows no improvement towards the performance goal.

12. **As per claim 9, Eilert** describes the method of claim 8, further comprising: requesting the program to reset to a previous state if the service class shows no improvement towards the performance goal (**Col. 6, lines 36-40**). Examiner is interpreting providing the feedback of the resource reallocation made previously and again providing the opportunity to address performance problems as requesting the program to reset to a previous state if the service class shows no improvement towards the performance goal.

13. **As per claim 10, Eilert** describes the method of claim 1, further comprising: determining whether the service class meets the performance goal after the requesting (**Col. 3, lines 56-58**). Examiner is interpreting measuring the achievement of client performance goal as determining whether the service class meets the performance goal after requesting.

14. **As per claim 11, Eilert** describes an apparatus comprising: means for selecting a program if a service class fails to meet a performance goal (**Col. 3,**

lines 59-62); and means for requesting the program to self-tune (Col. 4, lines 62-65).

15. **As per claim 12, see the same rejection as per claim 10 above.**

16. **As per claim 13, Eilert describes the apparatus of claim 11, wherein the means for selecting further comprises: means for determining that the program is a bottleneck for the service class (Col. 7, lines 34-38).**

17. **As per claim 15, Eilert does describe the apparatus of claim 13, wherein the means for determining further comprises: means for determining that a response time for transactions in the service class that are associated with the program is greater than a threshold (Col. 6, lines 42-46,50-55; Col. 8, lines 44-46). Examiner is interpreting performance index of a class is less/greater than one as means for determining that a response time for transactions in the service class that are associated with the program is greater than threshold.**

18. **As per claim 20. Eilert describes a signal-bearing medium encoded with instructions, wherein the instructions when executed comprise:**

- **selecting a program if a service class fails to meet a performance goal (Col. 3, lines 59-62);**
- **requesting the program to incrementally self-tune (Col. 4, lines 53-56).**

Examiner is interpreting incremental detection and correction of performance problems as requesting the program to incrementally self-tune; and

- determining whether the service class meets the performance goal after the requesting **(Col. 3, lines 56-58)**. Examiner is interpreting measuring the achievement of client performance goal as determining whether the service class meets the performance goal after requesting.

19. **As per claim 23, Eilert** describes the signal-bearing medium of claim 20, wherein the selecting further comprises: determining that the program has a priority below a threshold. Examiner is interpreting as lower importance value has been specified **(Col. 7, lines 12-15)** as determining that the program has a priority below a threshold.

20. **As per claim 27, Eilert** describes the signal-bearing medium of claim 20, wherein the performance goal is a response time goal for the service class **(Col. 3, lines 34-36)**.

21. **As per claim 28, Eilert** describes the signal-bearing medium of claim 20, wherein the program is associated with at least one transaction in the service class **(Col. 5, lines 1-5 referred as "performance block")**.

22. **As pre claim 29, Eilert** describes the signal-bearing medium of claim 20, wherein the requesting the program to incrementally self-tune further comprises: requesting the program to increase performance **(Col. 4, lines 62-65)** if the program is a bottleneck for the service class **(Col. 7, lines 34-38)** or if the program initiates a majority of work associated with the service class **(Col. 5, lines 2-5)**. Examiner is interpreting as functioning of the GDPC provides a feedback loop for incremental detection and correction of the performance problems as requesting the program to increase performance.

23. **As per claim 30, Eilert** describes the signal-bearing medium of claim 20, wherein the requesting the program to incrementally self-tune further comprises: requesting the program to decrease performance if a response time of transactions in the service class that are associated with the program is less than a threshold percentage of a response-time goal for the program (**Col. 4, lines 45-52**). Examiner is interpreting a client performance goal class is selected for which a performance can be decrease based on relative goal importance and the current value of the performance index, and performance index is measured on percentage as requesting the program to decrease performance if a response time of transactions in the service class that are associated with the program is less than a threshold percentage of a response-time goal for the program.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. **Claims 14, 16-18, 21-22, 24-26 and 31-41** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Eilert (USPAT 5,537,542; Dated July 16,1996)**.

26. **As per claim 14, Eilert** does not explicitly describe the apparatus of claim 13, wherein the means for determining further comprises: means for determining

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that a response time for transactions in the service class that are associated with the program divided by the response time for all transactions in the service class is greater than a threshold. However, Eilert does describe performance index = (actual response time)/(response time goal) (**Col. 6, lines 43-53**), Which is analogous to response time for transactions in the service class that are associated with the program divided by the response time for all transactions in the service class; and performance index is greater than one as threshold value.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Eilert's method of the performance index value for a client performance goal class is the measure of how well that goal class is meeting its specified goal (**Col. 8, lines 44-46**).

27. **As per claim 16, Eilert** does not explicitly describe the apparatus of claim 11, wherein the means for selecting further comprises: means for determining that the program is associated with a majority of work in the service class. However, Eilert does describe if a server is serving multiple transactions at a given time, the server will have multiple performance block and contains the identifier of the client performance goal class (**Col.5, lines 2-5**), which is analogous as means for determining that the program is associated with majority of work in the service class.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Eilert's method. By doing so server class can determine which server will donate resources (**Col. 4, lines 49-52**).

28. **As per claim 17, Eilert** does describe the apparatus of claim 16, wherein the means for determining further comprises: means for determining that the program is associated with a majority of transactions currently in the service class (**Col. 5, lines 2-5**). Examiner is interpreting having multiple performance blocks in a server means having multiple transactions, since performance blocks contains an identifier of transaction class they are associated with as means for determining that the program is associated with a majority of transactions currently in the service class.

29. **As per claim 18, Eilert** describes the apparatus of claim 16, wherein the means for determining further comprises: means for determining that the program is associated with a majority of transactions in the service class within a time period (**Col.5, lines 2-5**). Examiner is interpreting a server serving multiple transactions at a given time, the server will have multiple performance blocks as means for determining that the program is associated with a majority of transactions in the service class within a time period.

30. **As per claim 21, Eilert** describes the signal-bearing medium of claim 20, wherein the selecting further comprises: determining that a response time of transactions in the service class that are associated with the program is less than a threshold percentage of a response-time goal for the program (**Col. 6, lines 42-46,50-55; Col. 8,lines 44-46**). It is obvious that threshold value is 1.0 can be converted into percentage form simply by mathematical multiplication with 100. Examiner is interpreting performance index of a class is less/greater than one as means for determining that a response time of transactions in the service class

that are associated with the program is less than a threshold percentage of a response-time goal for the program.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Eilert's method of the performance index value for a client performance goal class is the measure of how well that goal class is meeting its specified goal (**Col. 8, lines 44-46**).

31. **As per claim 22, Eilert** describes the signal-bearing medium of claim 20, wherein the selecting further comprises: determining that a response time of all transactions initiated by the program is less than a threshold percentage of a response-time goal for the program (**Col. 6, lines 50-55**). It is obvious that performance index less than 1.0 can be converted in the percentage form just by mathematical multiplication with 100. Also, examiner is interpreting performance index less than 1.0 as determining that a response time of all transactions initiated by the program is less than a threshold percentage of a response-time goal for the program.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Eilert's method of the performance index value for a client performance goal class is the measure of how well that goal class is meeting its specified goal (**Col. 8, lines 44-46**).

32. **As per claim 24, Eilert** does not explicitly describe the signal-bearing medium of claim 20, further comprising: if the service class does not meet the performance goal after the requesting, determining whether performance of the service class has improved. However Eilert does describe functioning the GDPC

provides a feedback loop for the incremental detection and correction (**Col. 4, lines 62-65**). It is obvious that GDPC does have same functionality as if the service class does not meet the performance goal after the requesting, determining whether performance of the service class has improved.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Eilert's method so that the operating system takes on responsibility for allocation of system resources to servers of the clients such that the clients goals are best achieved (**Col. 1, lines 54-56**).

33. **As per claim 25, Eilert** describes the signal-bearing medium of claim 24, further comprising: if the performance of the service class has improved, repeating the requesting so long as the service class does not meet the performance goal and the performance of the service class improves (**Col. 4, lines 62-65**). Examiner is interpreting providing feedback loop for the incremental detection and correction of performance problems as if the performance of the service class has improved, repeating the requesting so long as the service class does not meet the performance goal and the performance of the service class improves.

34. **As per claim 26, Eilert** describes the signal-bearing medium of claim 24, further comprising: if the performance of the service class has not improved, requesting the program to reset to a previous tuned state (**Col. 6, lines 36-40**). Examiner is interpreting providing the feedback of the resource reallocation made previously and again providing the opportunity to address performance problems

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as requesting the program to reset to a previous state if the service class shows no improvement towards the performance goal.

35. **As per claim 31, Eilert describes an electronic device comprising: a processor; and a storage device encoded with instructions, wherein the instructions when executed on the processor (Col. 2, lines 55-58) comprise; but does not explicitly describe “receiving a plurality of notifications indicating that a respective plurality of programs support performance tuning, determining that a first service class failed to meet a performance goal, selecting at least one program from the plurality of programs, and requesting the at least one program to incrementally self-tune.”** However, it does describe:

- GDPC providing a feedback on the effect of the resource reallocations made previously and again providing the opportunity to address performance problems (Col. 6, lines 36-40). It is obvious that functionality of GDPC is analogous as receiving a plurality of notifications indicating that a respective plurality of programs support performance tuning.
- Selecting the client performance goal classes that are not meeting their goal and improving the performance of these server work units (these are referred as programs; Col. 2, lines 59-61, Col. 3, lines 56-62). It is obvious that selecting the client performance goal classes that are not meeting their goal and improving performance is analogous as determining that a first service class failed to meet a performance goal,

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selecting at least one program from the plurality of programs, and
requesting the at least one program to incrementally self-tune.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use Eilert's method so that the operating system takes on responsibility for allocation of system resources to servers of the clients such that the clients goals are best achieved (**Col. 1, lines 54-56**).

36. **As per claim 32, Eilert** describes the electronic device of claim 31, wherein the requesting further comprises: requesting the at least one program to self-tune a resource associated with the at least one program (**Col. 4, lines 49-52**). Examiner is interpreting server class determines which server will potentially donate resources to the receiver server as requesting the at least one program to self-tune a resource associated with the at least one program.

37. **As per claim 33, Eilert** describes the electronic device of claim 31, wherein the instructions further comprise: requesting the at least one program to self-tune a resource internal to the program (**Col. 4, lines 45-47**). Examiner is interpreting a client performance goal class is selected for which a performance can be decrease as requesting the at least one program to self-tune a resource internal to the program.

38. **As per claim 34, Eilert** describes the electronic device of claim 31, wherein the instructions further comprise: determining whether the requesting caused performance of the first service class to improve (**Col. 6, lines 36-40**). Examiner is interpreting providing a feedback loop on the effect of the resource reallocations made previously and again providing the opportunity to address

performance problems as determining whether the requesting caused performance of the first service class to improve.

39. **As per claim 35, Eilert** describes the electronic device of claim 34, wherein the instructions further comprise: if the requesting did not cause the performance of the first service class to improve, selecting a second program from the plurality of programs and requesting the second program to incrementally self-tune (**Col. 6, lines 36-40; Col. 4, lines 49-52**). Examiner is interpreting providing a feedback on the effect of the resource reallocation made previously and again providing the opportunity to address performance problems by donating the resources of donor to the receiver server class as if the requesting did not cause the performance of the first service class to improve, selecting a second program from the plurality of programs and requesting the second program to incrementally self-tune.

40. **As per claim 36, Eilert** describes the electronic device of claim 34, wherein the instructions further comprise: if the requesting did cause the performance of the first service class to improve, repeating the requesting until the performance goal is met or until the performance of the first service class no longer improves (**Col. 4, lines 62-65**). Examiner is interpreting GDPC provides a feedback loop for the incremental detection and correction of performance problems so as to operating system adaptive and self tuning as if the requesting did cause the performance of the first service class to improve, repeating the requesting until the performance goal is met or until the performance of the first service class no longer improves.

41. **As per claim 37, Eilert** describes the electronic device of claim 31, wherein the instructions further comprise: if the requesting did not cause performance of the first service class to meet the performance goal, tuning a global resource that is common to all the plurality of programs (**Col. 6, lines 10-15, 20-25**). Examiner is interpreting if using a donor to improve a receiver is projected to result in more harm to donor than improvement to the receiver, and if there is another potential donor, control passes to select another potential donor as if the requesting did not cause performance of the first service class to meet the performance goal, tuning a global resource that is common to all the plurality of programs.

42. **As per claim 38, Eilert** describes the electronic device of claim 34, wherein the instructions further comprise: if the requesting did cause the performance of the first service class to improve, determining whether performance of a second service class was impaired subsequent to the requesting, wherein the second service class has a higher priority than the first service class (**Col. 6, lines 10-15**). Examiner is interpreting if using a donor to improve a receiver is projected to result in more harm to donor than improvement to the receiver relative to the goals and importance as if the requesting did cause the performance of the first service class to improve, determining whether performance of a second service class was impaired subsequent to the requesting, wherein the second service class has a higher priority than the first service class.

43. **As per claim 39, Eilert** describes the electronic device of claim 38, wherein the instructions further comprise: if the performance of the second service class was impaired subsequent to the requesting, resetting the program to a previous tuned state (**Col. 6, lines 9-16**). Examiner is interpreting if using a donor to improve a receiver is projected to result in more harm to donor than improvement to the receiver relative to the goals and importance, the resource reallocation is not done as f the performance of the second service class was impaired subsequent to the requesting, resetting the program to a previous tuned state.

44. **As per claim 40, Eilert** describes the electronic device of claim 31, wherein the instructions further comprise: globally tuning the electronic device prior to the determining (**Col. 3, lines 55-58**). Examiner is interpreting GDPC performing the functions of measuring the achievement of client performance goals by monitoring server performance as globally tuning the electronic device prior to the determining.

45. **As per claim 41, Eilert** describes the electronic device of claim 31, wherein the requesting further comprises: notifying the at least one program of a global resource available for use by the at least one program (**Col. 3, lines 58-62**). Examiner is interpreting selecting the client performance goal classes that are not meeting their goal, and improving the performance of the selected client transactions by improving the performance of the server work unit (server work units are the server programs that do the useful work that is the purpose of the

server computer; Col. 2, lines 59-61) as notifying the at least one program of a global resource available for use by the at least one program.

46. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Eilert (USPAT 6,393,455) discloses "Workload management method to enhance shared resource access in a multi system environment" is considered pertinent in managing shared resources.
- Eilert (USPAT 5,675,739) discloses "Apparatus and method for managing a distributed data processing system workload according to a plurality of distinct processing goal types" is considered pertinent in managing a workload distributed across data processing systems.
- Masuoka (USPAT 6,081,826) discloses "System using environment manager with resource table in each computer for managing distributed computing resources managed for each application" is considered pertinent in managing computing resources, which are available to an application.

Allowable Subject Matter

47. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

- a. The following is a statement of reasons for the indication of allowable subject matter: prior art has failed to teach applicant's claimed invention **"means for selecting a program if a service class fails to meet a performance goal; and means for requesting the program to self-tune; means for determining that the program is associated with a majority of work in the service class; means for determining that the program is associated with transactions within a time period whose aggregate response time is greater than half of a response time for all transactions in the service class during the time period."**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loren Chauhan whose telephone number is 571-270-1554. The examiner can normally be reached on Mon.-Fri. 7:30-5:00 (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Megnistu can be reached on 571-270-1550. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Loren Chauhan
Examiner
Art Unit 2109


AMARE MENGISTU
SUPERVISORY PATENT EXAMINER